College & Career Awareness

Program Area(s): Information Technology

Lesson Plan Title: Cartoon Animation
Online animation –Complete a simple animation.

Estimated Time: 45 minutes

Primary CTE Pathway(s) Explored: Commercial Art, Digital Media, Television Broadcasting

Intended Learning Outcome(s):
- Become acquainted with a wide range of occupations, CTE Pathways, career trends and emerging careers.
- Participate in experiential activities related to career expectations.
- Explain how academic content knowledge and technical skills are used in various careers.

College and Career Awareness Standard, Objective(s):
Standard 7, Objective 1
Standard 7, Objective 1

Cross Curriculum Integration: Marketing Entrepreneurship
- **21st Century or Interpersonal Soft Skills:** Critical thinking, collaboration, communication, creativity.
- **Technology:**

Career Opportunities in the CTE Pathway(s): Computer programmers, software developers, applications, marketing managers, public relations specialist, information security analysts, Web developers, animators, multimedia artists, environmental designers, video game developers

Nontraditional Career Opportunities: Computer programmers, information security analysts, Web developers, video game developers

STEM Specific Career Opportunities: Mechanical engineers, computer programmers, systems analysts

Methods (Approach to Teaching and Learning):
- Direct Instruction and Demonstration
- Activity/Inquiry/Practice Centered Instruction

Materials Needed:
- Computer lab with Internet access or animation software installed
- Sticky notepads to make a flipbook
- Software: Flash and Ajax Animator (Chrome Browser Extension)

Vocabulary:
- Frame – Motion picture film is made up of a string of individual frames that, when viewed in rapid succession,

create the illusion of movement. There are twenty-four frames per second to film.

- **Key Frame** – A key frame, in animation or film, is a drawing that defines the starting and ending points of animation smooth transition.
- **Render** – Process of calculating all the parameters of an object or scene to produce an image.
- **Timeline** – The area of the computer program that shows the frames and key frames and the order they are in for the animation.
- **Tween** – A smooth transition between key frames rendered by a computer.

Prior Knowledge Required by Students:
- Basics of how animation works. Students should be familiar with "Flip Book Animation" (drawing a picture slightly different on each page, so that when it is flipped through it looks animated)

Instructional Procedures:

Discussion
How did animation start? What is animation? What types of jobs could use animation?

Demonstrate
Draw a picture on a white board or chalk board. Ask the students how it could be slightly changed for the next step in the animation. Make the change. Talk about frames and each picture that you create is a frame in the animation.

Apply
Have the students create their own short 25 frame animation of their choice using one of the following:
- Animation Software such as Adobe Flash
- A flipbook from a sticky note pad

Presentation
Have students present their animation to the class or to a small group.

**If you have more time and the facilities, the software versions of this activity are quite fun, but can take more time than the 45 minutes given. The flipbook can be done much more quickly by the students and can be just as effective.

Career Video
Untangling The Hairy Physics Of Rapunzel

Additional Resources:

- How to make a Flip Book Animation
- The History of Animation: Advantages and Disadvantages of the Studio System in the Production of an Art Form
- History of Multimedia Animation

Assessment(s):
- Explanation of concepts (written, oral, or through demonstration or performance of particular skills)
- Critical thinking demonstration (written, oral, or through demonstration or performance)